

# THE IDEAL POWER STEERING INSTALLATION GUIDE

## Reduce Returns with these Simple Steps

### STEP 1

#### REMOTE RESERVOIR

Replace the reservoir or clean the internal filter.



### STEP 3

#### IN-LINE FILTER

Install filter in the return line to catch contamination.



### STEP 4

#### HOSES

Replace hoses at 5 years or 100K miles.



### STEP 2

#### FLUSH

Always flush with 4-5 quarts of **OE recommended fluid** to remove contaminants.



### STEP 5

#### VACUUM BLEED

Remove air to ensure proper function and to prime the steering pump.

**This procedure is critical for power steering systems with a remote reservoir.**



Refer to the Power Steering System Vacuum Bleeding & Flush Procedure documents for complete instructions.

This is a quick reference guide only. For more detailed information on system operation and servicing, always refer to your technical service manual or approved information system.



Bleeding



Flush

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# POWER STEERING SYSTEM FLUSH PROCEDURE

## POWER STEERING SYSTEM FLUSH PROCEDURE

The power steering system must be flushed prior to installation of any replacement component. If you are installing a replacement gear or rack, we strongly recommend that the pump and hoses be replaced as well.

*\*If vehicle is equipped with a remote power steering fluid reservoir with an internal filter/screen, replace the reservoir with a NEW one, or thoroughly clean the screen with an approved chemical cleaning solution **BEFORE** beginning the flush procedure.*

### Follow the steps below to properly flush the system:

1. Raise the front end of the vehicle off the ground until the tires and wheels turn freely. Refer to the vehicle service manual for instructions on correct procedure to lift the vehicle.
2. Place a large drain pan under the fluid return hose to collect the draining fluid.
3. Remove the fluid return hose at the power steering pump reservoir connection. Plug/Cap the reservoir return inlet (**important**). Place the end of the return line into the drain pan (*plug the end until you are ready to perform the flush to prevent leaking*). Fill the reservoir with **NEW OE** recommended power steering fluid.
4. Disable the engine so it will not start when cranked. Refer to the vehicle service manual for correct procedure.
5. Crank the engine in short intervals and continue to replenish fluid in the reservoir until the fluid coming from the return line is a clean and solid stream without air mixed in. Caution should be taken to ensure that the reservoir is kept above the minimum level and the power steering pump is not operated without fluid while performing the flush. This should take from 4 – 5 quarts of fluid.
6. Do **NOT** subject the vehicle starter to prolonged cranking, as this may damage the starter.
7. If you are also changing a steering component such as the pump, gear, or rack, refer to the vehicle service manual for replacement procedures. If the vehicle is over 5 years old or has 100K miles or more, it is highly recommended you also change the steering fluid lines at this point. It is important that the flush is completed before the components and lines are replaced to ensure contaminated fluid is not introduced to the new components, lines, and system.
8. Re-connect the return line to the power steering reservoir. Make sure the fluid in the reservoir is at the proper operating level.
9. Vacuum bleed the power steering system. Refer to the **Power Steering System Vacuum Bleeding Procedure** and **video**. For vehicles equipped with a remote steering reservoir, vacuum bleeding is a critical procedure.
10. Lower the vehicle and check the power steering system for leaks, excessive noise, smooth assist, and proper operation.

Flushing 4-5 quarts of fluid through the system will remove contaminants from the system. Use OE recommended fluid type.



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# POWER STEERING SYSTEM VACUUM BLEED

## POWER STEERING SYSTEM VACUUM BLEED

1. Verify that hoses are routed properly. Contact with the frame or engine may cause system noises.
2. Verify all hose connections are tight.
3. Remove the pump reservoir cap.
4. Fill the reservoir to the **FULL COLD** level.
5. Tightly insert rubber vacuum plug onto the pump reservoir.
6. Attach the vacuum pump to the rubber vacuum plug.
7. Apply a vacuum of 60-68kPa (18-20 in Hg) maximum for a minimum of 3 minutes.
8. Slowly release the vacuum.
9. Remove the vacuum pump and rubber plug.
10. Repeat steps #4 through #9 until fluid no longer drops.
11. Fill reservoir to the **FULL COLD** level\*. Reinstall the pump reservoir cap.
12. Start the engine. Allow engine to idle.
13. Turn off engine. Verify the fluid level.
14. Start the engine. Allow the engine to idle.
15. Turn the wheel, lock to lock, three times.

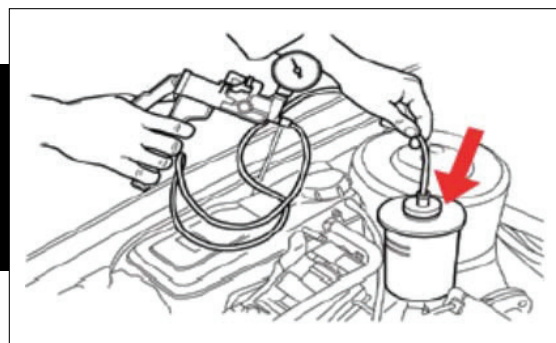
**CAUTION:** Do **NOT** hold steering wheel at the lock to lock positions.

16. Switch engine off. Verify fluid level. Check for any signs of air in the system.  
If air is still present, repeat the procedure as necessary.

*\* When adding or changing the fluid, be sure to use only the manufacturer's suggested fluid.*



Vacuumping bleeding is a **critical procedure for power steering systems with a remote reservoir.**



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